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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

MOLON MOTOR AND COIL CORPORATION,)	
)	
)	
Plaintiff,)	
)	
v.)	No. 04 C 5134
)	
MERKLE-KORFF INDUSTRIES, INC.,)	Judge John W. Darrah
)	
Defendant.)	
)	

MEMORANDUM OPINION AND ORDER

In August of 2004, the Plaintiff, Molon Motor and Coil Corporation (“Molon”), filed suit against the Defendant, Merkle-Korff Industries, Inc. (“Merkle-Korff”), alleging infringement of Molon’s U.S. Patent No. 6,054,785 (“the ‘785 patent”). Presently before the Court is the claim construction of the ‘785 patent.

LEGAL STANDARD

“In judicial ‘claim construction’ the court must achieve the same understanding of the patent . . . as would a person experienced in the technology of the invention. Such a person would not rely solely on a dictionary of general linguistic usage, but would understand the claims in light of the specification and the prior art, guided by the prosecution history and experience in the technological field.” *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1299 (Fed. Cir. 1999).

To construe a patent claim, a court analyzes the intrinsic evidence of the record, which includes the claims and written description of the patent itself, and the prosecution history, if it is in evidence. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003) (*Altiris*); *Biovail Corp. v. Andrx Pharmaceuticals, Inc.*, 239 F.3d 1297, 1300 (Fed. Cir. 2001) (*Biovail*). When analyzing the intrinsic evidence, the court starts with the language of the claims and engages in a “heavy presumption” that claim terms carry their ordinary meanings as viewed by one of ordinary skill in the art. *Altiris*, 318 F.3d at 1369. The ordinary and accustomed meaning of a disputed claim term is presumed to be the correct one, unless either a different meaning is clearly and deliberately set forth in the intrinsic evidence or the ordinary and accustomed meaning of the disputed term would deprive the claim of clarity – then extrinsic evidence may be used to ascertain the proper meaning of the term. *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1362-63 (Fed. Cir. 1999).

The specification is highly relevant to the claim construction analysis. The specification is the single best guide to the meaning of a disputed term. *See Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002) (*Teleflex*). However, while the claims must be read in view of the specification, limitations from the specification are not read into the claim. *Teleflex*, 299 F.3d at 1326. Claim language must also be read consistently with the totality of the patent’s applicable prosecution history. *Biovail*, 239 F.3d at 1300.

Reliance on extrinsic evidence is improper if the intrinsic evidence unambiguously describes the scope of the patented invention. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (*Vitronics*). However, the court is not barred from ever considering extrinsic evidence. *See Plant Genetic Sys. v. DeKalb Genetics Corp.*, 315 F.3d 1335, 1346

(Fed. Cir. 2003) (*DeKalb*); *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (*Pitney Bowes*). Extrinsic evidence may be consulted to ensure that the court's claim construction is not inconsistent with the expressed and widely held understanding to one in the field. *See DeKalb*, 315 F.3d at 1346; *Pitney Bowes*, 182 F.3d at 1308.

Dictionary definitions may also be consulted in establishing a claim term's ordinary meaning. *Altiris*, 318 F.3d at 1369. Dictionaries can help define a term but should not be used exclusively. “[B]ecause words often have multiple dictionary definitions, some having no relation to the claimed invention, the intrinsic record must always be consulted to identify which of the different possible dictionary meanings of the claim terms in issue is most consistent with the use of the words by the inventor.” *Intellectual Prop. Dev. v. UA-Columbia Cablevision*, 336 F.3d 1308, 1315 (Fed. Cir. 2003) (citations omitted).

BACKGROUND

The '785 patent includes six claims, one of them independent and five dependent. Currently before the Court for construction are terms from independent Claim 1 and dependent Claim 2, which directly depends from Claim 1 and incorporates additional limitations. There are eight terms at issue in the construction of Claims 1 and 2 of the '785 patent.

Claim 1 of the '785 patent describes a compact miniature motor. The relevant portion of Claim 1 of the '785 patent reads as follows:

A compact miniature motor, comprising:
a DC motor with a permanent magnet attached thereto;
a **worm gear** driven at one end by the DC motor;
a pinion transfer gear engaging at one end at a right angle with the
 worm gear;
at least one **cluster gear** engaging at a right angle with another end of

the pinion transfer gear;
an **output gear** driven by at least one cluster gear; and
an output shaft engaging at a right angle with the output gear;
whereby the worm gear, the pinion transfer gear, the [sic] at least one
cluster gear and the output gear form a gear train that wraps **tightly**
around the DC motor in the shape of a capital letter J.

(‘785 patent, Claim 1 (emphasis added to terms at issue for construction)).

Claim 2 “depends from” Claim 1 and, thus, incorporates all of the limitations of Claim 1.

35 U.S.C. § 112 ¶ 4. Claim 2 reads as follows:

A compact miniature motor, according to claim 1, further comprising:
a first cover for protecting the DC motor;
a gearbox for containing the gear train; and
inverted trunnions, connected at one end to the first cover and
connected at an opposite end to the gearbox, for stabilizing the
pinion transfer gear.

(‘785 patent, Claim 2 (emphasis added to term at issue for construction)).

ANALYSIS

The parties have agreed on the construction of six of the eight terms, all from Claim 1 – pinion transfer gear, engaging at a right angle, cluster gear, output gear, tightly around the DC motor, and in the shape of the capital letter J – as follows:

- “**pinion transfer gear**” – two spaced apart gears, which may be of the same or different sizes, mounted as a unit with a common shaft or axis of rotation;
- “**cluster gear**” – two gears, of different sizes, mounted as a unit with a common shaft or axis of rotation;
- “**output gear**” – a gear in a gear train, which is connected to an output shaft;

- “**tightly around the DC motor**” – closely around the direct current motor;
- “**in the shape of a capital letter J**” – substantially in the form of a capital letter J.
- “**engaging at one end at a right angle**” and “**engaging at a right angle**” – the meshing, interlocking, interacting, or connecting of two structures at a right angle (i.e., substantially 90 degrees) to transmit power.

The Court adopts the proposed agreed construction of the six terms listed above. The parties did not reach agreement of the construction for two terms: worm gear (Claim 1) and inverted trunnions (Claim 2). Thus, the construction of these two terms is currently before this Court. The parties have submitted briefs and made oral presentations during a hearing on these issues.

Prosecution History

Molon filed its application for the ‘785 patent on May 21, 1999; and the ‘785 patent’s claims were allowed, without amendment, by the Examiner’s first office action. After receiving the Notice of Allowance, however, Molon filed a Rule 312 Amendment After Allowance, which the examiner subsequently entered. Molon’s amendment requested that the Patent Office remove each and every reference to “ice-crushers” and “refrigerators” from the ‘785 patent application’s original specification and abstract. In support of this request, Molon claimed that its “reference to an ice-crusher . . . one of the uses for the compact miniature motor of the present invention” had been “inadvertently added” by the inventors in the initial disclosure materials as a possible use and had been inserted into the application by Molon’s attorney. On December 2, 1999, the

Examiner entered the Patentee's Amendment. Contrary to the reference to ice crushers, Molon did not seek to have the other included use of the '785 patent – to “provide a vending machine with miniature motors” – removed.

Worm Gear

Molon Motor and Merkle-Korff propose different constructions of the term “worm gear,” as follows:

- **Molon's proposed construction of “worm gear”** – a gear having a screw thread (for example, helical or spiral) that may mesh with a toothed wheel, typically used to connect non-parallel, non-intersecting shafts.
- **Merkle-Korff's proposed construction of “worm gear”** – a “worm gear” means a worm, which is a shaft with continuous single, double, or quadruple thread screws that completely encircle the axis of the shaft. The “worm gear” typically does not permit back drive, and meshes with a toothed gear to transfer conjugate rotary motion between two shafts at an inclined angle.

Merkle-Korff asserts that the '785 patent should include the following limitations: (1) that the shaft must have continuous threads that completely encircle the axis of the shaft; (2) that the thread screws must be single, double, or quadruple; (3) and that the worm gear does not typically permit backdrive.

Molon asserts Merkle-Korff's proposed construction has numerous problems. First, Molon asserts that Merkle-Korff's construction would wrongly read limitations from the preferred embodiment into the claim, citing *Teleflex Inc. v. Ficosa North America Corp.*, 299

F.3d 1313, 1328 (Fed. Cir. 2002) (the Federal Circuit has “cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification”). Further, the numerical limitations for the number of thread screws wrongly adds narrowing modifiers before an otherwise general term that stands unmodified in the claim, citing *Bell Communications Research v. Vitalink Communications Corp.*, 55 F.3d 615, 621-22 (Fed. Cir. 1995).

Merkle-Korff responds by asserting that these limitations are not preferred embodiments but are, rather, descriptions of the invention detailed in the ‘785 patent’s “Summary of the Invention.”

Molon asserts that its construction encompasses the ordinary and plain meaning of the term “worm gear.” Citing standard technical reference manuals, Molon asserts that its construction captures the meaning of the term. On the other hand, Merkle-Korff states that Molon is using the term in the ‘785 patent in an unusual way – i.e., to refer to what is typically called the “worm” as the “worm gear” and to refer to what is typically called the “worm gear” as the “worm wheel.” Merkle-Korff further argues that a European patent application made by Molon supports its contention that Molon is not using the ordinary construction of the term “worm gear.” Molon asserts the information related to the European application is extrinsic evidence.

A patentee may not state that the claims of a patent do not cover a particular device during prosecution and then change that position during an infringement suit. *Spring Window Fashions LP v. Novo Industries, L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003). However, the prosecution history may not be viewed as evidence of the subjective intent of the patent applicant

or the patent examiner. “Representations during prosecution cannot enlarge the content of the specification”; and it is proper, instead, to rely on the specification itself for guidance in analyzing the claims. *Biogen, Inc. v. Berlex Labs., Inc.*, 318 F.3d 1132, 1139-40 (Fed. Cir. 2003). Here, there is nothing in the prosecution history that would support deviation from the plain and ordinary meaning.

Adopting Merkle-Korff’s construction, however, would improperly add a claim limitation from the specification. *See Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1204-05 (Fed Cir. 2002). Limitations from the specific embodiments of a patent that are described in the drawings and specification of a patent cannot be read as limitations into the claims. *Comark v. Communications, Inc. v. Harris Corp.*, 156 F.3d 1182 (Fed. Cir. 1998). The specification may be used to interpret the claims; it may not be used as a source for adding extraneous limitations. *Transmatic v. Gulton Indus.*, 53 F.3d 1270, 1277 (Fed. Cir. 1995).

Molon’s proposed definition of the term “worm gear” properly describes the claim.

Inverted Trunnion

Molon Motor and Merkle-Korff propose the following constructions of the term “inverted trunnion”:

- **Molon’s proposed construction of “inverted trunnion”** – inward directed pins or pivots on which something can be rotated or mounted.
- **Merkle-Korff’s proposed construction of “inverted trunnion”** – two independent inward directed integral supports on which something can be rotated or mounted.

Molon asserts that Merkle-Korff wrongly inserts the words “independent” and “integral” into the definition. Merkle-Korff counters that Molon’s definition is overly broad because the language of Claim 2 itself calls for “inverted trunnions, connected at one end to the first cover and connected at an opposite end to the gearbox, for stabilizing the pinion transfer gear.” (‘785 patent).

Merkle-Korff argues that the specification supports its construction of the term. The specification reads:

Instead of extroverted trunnions supports used in the prior art, the transfer gear of the present invention has internal space provided at its end for supports that extend inside the transfer gear, thus shortening the supported length of the transfer gear, when compared to the prior art which uses transfer gears that are virtually unsupported except at the very tips of their ends. Consequently, the invention provides a more stable mesh operation.

(‘785 patent, Col. 2, lines 21-29). Merkle-Korff continues, stating that the ‘785 patent “makes plain” that Claim 2 requires two trunnions, by quoting the ‘785 patent specification in further detail:

A pair of internal trunnions 40 and 42 makes the transfer gear 34 stable by extending therein and engaging longitudinally the inside thereof from opposite ends. The one trunnion 40 is molded at one end to the first cover 16 while the other trunnion 42 is molded at its opposite end to the gearbox 14.

(‘785 patent, Col. 3, line 54-59). Merkle-Korff again attempts to add a claim limitation from the specification.

Molon’s proposed definition properly describes the claim.

CONCLUSION

For the foregoing reasons, the disputed terms of the '785 patent are construed, consistent with this opinion, as follows: (1) worm gear will mean: a gear having a screw thread (for example, helical or spiral) that may mesh with a toothed wheel, typically used to connect non-parallel, non-intersecting shafts; and (2) an inverted trunnion will mean: inward directed pins or pivots on which something can be rotated or mounted.

Dated: April 26, 2006


JOHN W. DARRAH
United States District Court Judge